

(19) World Intellectual Property
Organization
International Bureau



554 312

(43) International Publication Date
4 November 2004 (04.11.2004)

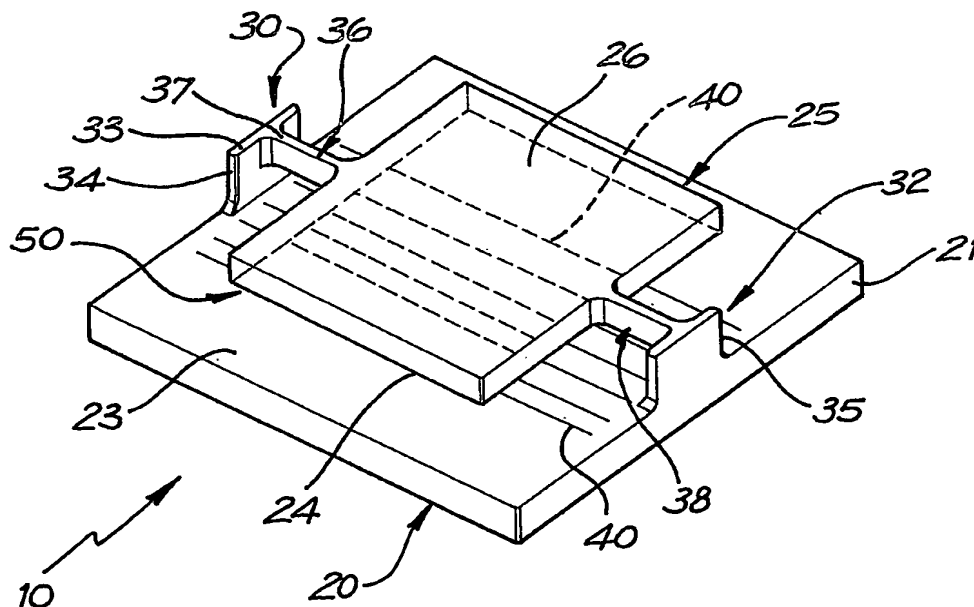
PCT

(10) International Publication Number
WO 2004/094956 A1

- (51) International Patent Classification⁷: **G01D 5/14, 5/16, G01B 7/14, G01P 3/52, G12B 21/04, 21/22**
- (21) International Application Number:
PCT/AU2004/000523
- (22) International Filing Date: 22 April 2004 (22.04.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
2003901914 22 April 2003 (22.04.2003) AU
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- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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(54) Title: **QUANTUM TUNNELLING TRANSDUCER DEVICE**



(57) Abstract: A monolithic micro or nano electromechanical transducer device includes a pair of substrates (20, 25) respectively mounting one or more elongate electrical conductors (40) and resilient solid state hinge means (30, 32) integral with and linking the substrates to relatively locate the substrates so that respective elongate electrical conductors (40) of the substrates are opposed at a spacing that permits a detectable quantum tunnelling current between the conductors when a suitable electrical potential difference is applied across the conductors. The solid state hinge means permits relative parallel translation of the substrates transverse to the elongate electrical conductors.



Published:

— *with international search report*

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